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EXAMINER

SERGEANT, RABON A

| ART UNIT | PAPER NUMBER |
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1711

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Paper No. 24

Application Number: 09/436,360
Filing Date: November 09, 1999
Appellants: Sanderson et al.

MAILED
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GROUP 1700

David S. Taylor
For Appellants

EXAMINER'S ANSWER

This is in response to the appeal brief filed September 9, 2002.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellants' statement of the status of amendments after final rejection contained in the brief is incorrect.

The amendment after final rejection filed on May 3, 2002 has been entered.

The terminal disclaimer filed September 9, 2002 has been recorded.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is substantially correct. The changes are as follows: The obviousness type double patenting rejection, set forth within paragraph 2 of the final Office action has been withdrawn, in view of the filing of the terminal disclaimer of September 9, 2002.

(7) Grouping of Claims

The appellants' statement in the brief that certain claims do not stand or fall together is not agreed with because appellants have provided no reason why claim 4 is separately patentable over the prior art. It is assumed that appellants' statement that claim 4 stands or falls alone pertains solely to the rejection of claim 4 under 35 USC 112, second paragraph.

(8) Claims Appealed

A substantially correct copy of appealed claim 13 appears on page 18 of the Appendix to the appellants' brief. The minor errors are as follows: Within line 1 of the

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claim, "as defined in" should be "of", and within line 2 of the claim, "terminal" should be "terminated".

(9) Prior Art of Record

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

| | | |
|--------------|---------------|-------------------|
| US 4,806,613 | Wardle | February 21, 1989 |
| US 4,976,794 | Biddle et al | December 11, 1990 |
| US 5,747,603 | Hinshaw et al | May 5, 1998 |

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The subject matter of claim 4, as amended, fails to further limit claim 1. Since claim 1 now requires the A blocks to be crystalline below about 60°C, the subject matter of claim 4 is not limiting at temperatures exceeding 60°C. For example, according to claim 1, the A block can be non-crystalline at 61°C; however, claim 4 cannot allow for this possibility, yet it depends from claim 1.

Appellants have stated at claim 1 allows for a possibility that dependent claim 4 restricts. This statement, in and of itself, supports the examiner's position that the claim

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is indefinite, because an independent claim must encompass all limitations set forth within the dependent claims.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13 and 43-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wardle ('613) in view of Biddle et al ('749) and Hinshaw et al ('603).

Wardle discloses the production of polyurethane elastomers, wherein the polymer comprises hard and soft segments linked by the reaction of the isocyanate reactive A segment and B segment with diisocyanates and linking compounds. Patentee further discloses the use of 2,4-toluene diisocyanate as a suitable asymmetric diisocyanate. See abstract and columns 4-9.

While Wardle discloses hard segments that meet those claimed by appellants, patentee fails to disclose the specific use of an oxirane-based soft segment, though patentee further fails to specifically limit the compound by species. However, the position is taken that the use of oxirane-based polymers was known to be useful as soft segments within hard segment/soft segment energetic thermoplastic elastomers at the time of invention. Biddle et al disclose at column 6, the use of polyglycidyl azide and polyglycidyl nitrate as soft blocks within such polymers. Furthermore, Hinshaw et al disclose at column 1 that such soft blocks contain secondary hydroxyl groups that are

reactive with isocyanates. Hinshaw et al further set forth procedures for enhancing the reactivity of oxirane-based polymers with polyisocyanates.

Therefore, in view of the teachings within the secondary references and especially in view of the teachings within Biddle et al that the claimed oxirane-based polymers are viable soft segments for hard segment/soft segment energetic thermoplastic elastomers, the position is taken that it would have been obvious to utilize an oxirane-based segment as the soft segment of Wardle, because it has been held that it is *prima facie* obvious to utilize a known ingredient for its known function. In re Linder, 173 USPQ 356. In re Dial et al, 140 USPQ 244.

Appellants have argued that one would not have been motivated to incorporate oxirane-based polymers into the composition of Wardle due to the decreased reactivity of the oxirane-based polymer's secondary hydroxyl group. This argument is considered to be deficient for three reasons. Firstly, a key concept of Wardle is based on various reactive groups having different reactivities; therefore, patentees were acquainted with the problems and solutions associated with producing polymers from reactive units having decreased reactivities. Secondly, Hinshaw et al disclose that secondary group containing oxirane-based polymers can be cured with polyisocyanates at column 1, lines 42-44. Thirdly, Hinshaw et al provide an additional means or teaching for rendering oxirane-based polymers more reactive with isocyanates; therefore, the secondary reference addresses and solves the very problem that appellants have relied upon to argue that it would not have been obvious to utilize oxirane-based polymers in

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Wardle. It is noted that appellants' claims are open to the modifications of oxirane-based polymers disclosed by Hinshaw et al.

(11) Response to Argument

Appellants' arguments have been addressed in the Grounds of Rejection.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


RABON SERGENT
PRIMARY EXAMINER

Conferees:


Supervisory Patent Examiner James Seldleek


Supervisory Patent Examiner David Wu

R. Sergent
February 6, 2003

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